

# Ideas and Resources for Educators and Students

## Aquatic Stewardship and You

By heading up programs, projects or experiences that teach about and inspire emotional connections to water, you can help create a citizenry that is genuinely interested and involved in the conservation of this vital natural resource. So dive in! Join other educators across the Commonwealth who are teaching people about our water resources.

### *Me teach about water? How?*

Stay cool, teaching about water is easy and fun.  
Here's how:

#### **1. Learn about water resources and water-based recreation:**

Obtain teaching materials listed here.  
Attend workshops designed for educators.

#### **2. Then teach a unit of study or conduct a water-based recreation activity.**

Topics to consider include: the water cycle, water quality, ground water, fishing, rafting, canoeing, water supply, water conservation, boating safety, commerce, historical uses of rivers, riverine habitats and riparian zones, wetlands, aquatic plants and wildlife, waterfowl hunting, plastics in our waterways, or other current issues.

*Tips to make these activities "meaningful" can be found at [www.chesapeakebay.net/education\\_mwee.aspx?menuitem=19534](http://www.chesapeakebay.net/education_mwee.aspx?menuitem=19534).*

#### **3. Integrate a stewardship project that is related to what you are studying.**

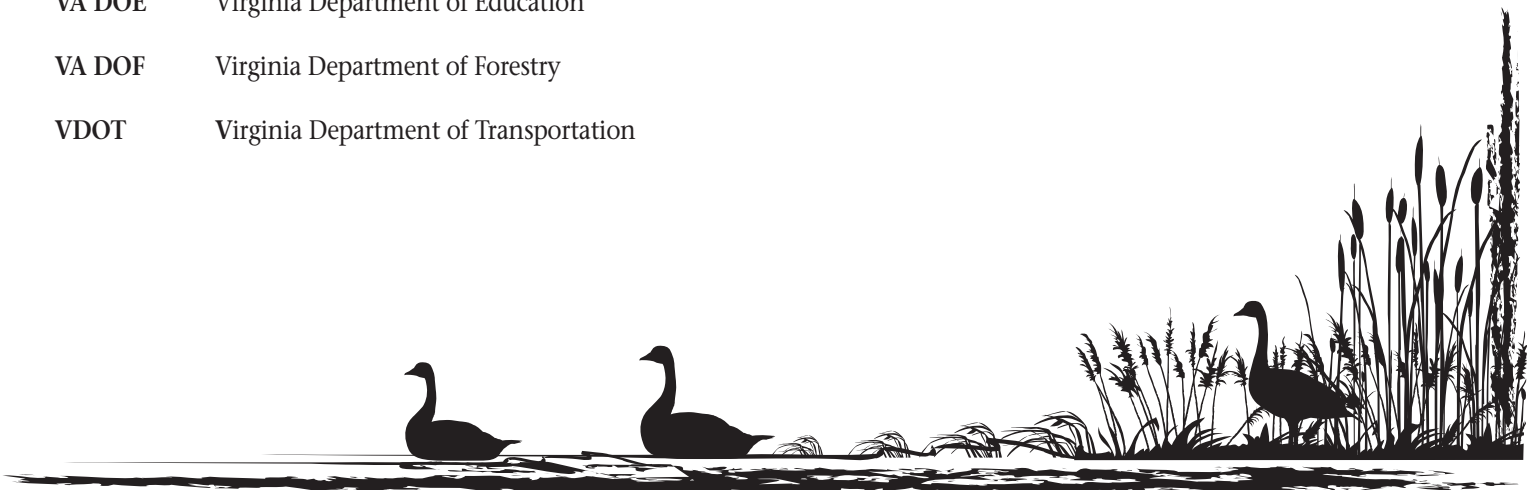
You'll find resources on how to monitor a stream, how to stencil storm drains, restore streamside areas, organize a "fish it out" litter project, build and install wood duck boxes, conduct a wildlife mapping project and more. There's something for everyone.

#### **4. And don't forget to register your effort with Stewardship Virginia.**

All participants in your project will receive a certificate of recognition from the Governor. Visit [www.dcr.virginia.gov/stewardship](http://www.dcr.virginia.gov/stewardship).

### Guide to Agency Abbreviations Used in the Descriptions

VA DCR	Virginia Department of Conservation and Recreation
VA DEQ	Virginia Department of Environmental Quality
VA DGIF	Virginia Department of Game and Inland Fisheries
VA DOE	Virginia Department of Education
VA DOF	Virginia Department of Forestry
VDOT	Virginia Department of Transportation



# Need a Helping Hand? Check Out This Stuff!

## Instructional Resources: Workshops and Activity Guides

### **Angling Education Program**

Educators can tip the scales when it comes to inspiring appreciation and stewardship for our fisheries and water resources by teaching people to fish. The VA DGIF Angling Education Program offers many resources to assist in accomplishing your goals of including fishing in your curriculum. The Tackle Loaner Program offers rods, reels and terminal tackle to use on loan, free of charge, for your fishing activities. The Materials Request Program provides educational materials such as posters, booklets, coloring books and the Basic Angling Education Series. The Basic Angling Education Series is a set of easy-to-use lesson plans that even the novice educator can use to teach about fish, aquatic habitats and sport fishing. Lessons cover a variety of topics on the how-to's of fishing while teaching environmental concepts. They can be supplemented with lessons from Project WILD or WET to form a total water education program. To access these programs, visit [www.dgif.virginia.gov/education/fishing/](http://www.dgif.virginia.gov/education/fishing/) or contact the Angling Education Program at 804-367-6778.

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### **Boating Basics Course**

Boat Virginia is an eight-hour certification course that meets the boating safety education requirement for all boaters and personal watercraft operations in Virginia. This education requirement is being phased in over the next several years. The course is taught by trained instructors. It is suitable for high school age youth. For additional information, contact the Regional Boating Education Coordinator at VA DGIF in your region. Visit the website for more information including the phase-in schedule for compliance at [www.dgif.virginia.gov/boating/education/](http://www.dgif.virginia.gov/boating/education/).

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### **Community Fishing Clinics Program**

Getting people in our communities more involved with local water resources can begin with an interest in fishing. This program is designed to help civic and youth groups, clubs and other organizations sponsor short duration angling education events. Planning assistance, educational materials and equipment loan are a part of the package. For more information visit [www.dgif.virginia.gov/education/fishing/](http://www.dgif.virginia.gov/education/fishing/).

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### **Offer a Course in Canoeing**

Canoeing down a waterway can be considered as a course in itself on environmental appreciation and sensitivity. So "go there," but teach canoeing first. It's a great way to start a water education program. The American Canoe Association offers courses in basic canoeing. For information on who to call in your area, contact their office in Fredericksburg at 540-907-4460 or visit [www.americancanoe.org](http://www.americancanoe.org).

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### **Virginia Agriculture in the Classroom Classes**

Farmers are finding new ways to improve water quality. Targeted primarily at K-8 grades, this program covers history, geography, technological changes, economics, plant science, agricultural ecology and environmental issues. Teacher workshops and other resources are available, as well as material for all age levels. For more information, contact the Ag in the Classroom coordinator at the Virginia Farm Bureau at 804-290-1141 or visit [www.agintheClass.org](http://www.agintheClass.org).

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### **Aquatic Project WILD Activity Guide**

This resource is a compilation of activities for educators that focus on aquatic wildlife, habitats, and human interactions. The lessons may be integrated into existing units of study, or a selection of activities can be used as the basis for a course of study. To obtain a guide, educators must attend a four-hour workshop sponsored by the VA DGIF. For more information contact Suzie Gilley, Project WILD Coordinator at VA DGIF at 804-367-0188 or [Suzie.gilley@dgif.virginia.gov](mailto:Suzie.gilley@dgif.virginia.gov) or visit the website at [www.dgif.virginia.gov/education/project-wild/](http://www.dgif.virginia.gov/education/project-wild/).

## Project WET (Water Education for Teachers) Curriculum and Activity Guide

This guide is a collection of 91 innovative activities, for use with kindergartners through twelfth graders that focuses on teaching about water resources. Water as a natural resource is the major theme, but it also addresses water chemistry and physics, historical and cultural uses of water, quantity and quality issues, aquatic wildlife, ecosystems and management strategies. To obtain a Curriculum and Activity Guide, educators must attend a free six-hour workshop. For more information, contact the Virginia Office of Environmental Education at the VA DEQ by visiting the website at [www.deq.virginia.gov/education/wet.html](http://www.deq.virginia.gov/education/wet.html).



## Healthy Water, Healthy People Activity Guide

Healthy Water, Healthy People (HWHP) is a new curriculum which includes an Educator's Guide and a Field Monitoring Guide. The Educator's Guide is a 200-page activity guide for educators of students in grades 6 through university level and is available from Project WET International for \$24.95. The Monitoring Guide is a 100-page technical reference manual with companion text and is available for \$14.95. These books are also available for free through a HWHP workshop offered periodically by the VA DEQ. For upcoming workshops, visit the Virginia Naturally Calendar of Events. ([www.vanaturally.com](http://www.vanaturally.com))

## Project Learning Tree® Program

Project Learning Tree® (PLT) is an environmental education program of the American Forest Foundation which provides activity guides for grades K-12, internet resources, GreenWorks! service learning grants, and a new GreenSchools! program. The PLT PreK-8 Environmental Education Activity Guide has been used by educators for over 30 years and has 96 activities that cover a broad array of environmental topics. Modules for secondary educators include Focus on Forests, Forest Ecology, Municipal Solid Waste, Risk, Places We Live, Biodiversity, and Forests of the World. PLT's Energy & Society Kit for grades K-8 is available for \$39.95 at PLT's online store. All PLT materials are correlated to Virginia's Standards of Learning and are available through free workshops. Workshops are posted on the Virginia Naturally Calendar of Events. Visit [www.plt.org](http://www.plt.org) and [www.cnr.vt.edu/plt](http://www.cnr.vt.edu/plt) for more information. To request a workshop, contact Lisa Deaton, Virginia PLT State Coordinator at the VA DOE, at 804-328-3031 or [lisa.deaton@dof.virginia.gov](mailto:lisa.deaton@dof.virginia.gov).

## Project Underground

The purpose of Project Underground is to create and build awareness of and responsible attitudes toward karst and cave resources and their management needs. The project is an environmental education program designed to promote better understanding of caves and karstlands. It is a supplemental program for use by educators of kindergarten through high school age students. Participants in Project Underground activities will gain an understanding of how the underground environment is an important part of the total environment. For more information, visit [www.dcr.virginia.gov/underground.shtml](http://www.dcr.virginia.gov/underground.shtml) or contact Carol Zokaite at VA DCR at 540-394-2553 or [Carol.Zokaite@dcr.virginia.gov](mailto:Carol.Zokaite@dcr.virginia.gov) to schedule a workshop.

## Project WILD: Science and Civics Guide

Science and Civics: Sustaining Wildlife is designed to serve as a guide for involving students in environmental action projects aimed at benefiting the local wildlife found in a community. The guide's activities are designed to help high school students in making decisions affecting people, wildlife, and their shared habitat in the community. The structure of Science and Civics makes it a suitable curriculum guide for high school teachers providing a Meaningful Watershed Educational Experience for their students. The guide is available only through in-service workshops sponsored by the VA DGIF. For more information contact Suzie Gilley, Project WILD Coordinator at VA DGIF at 804-367-0188 or [Suzie.gilley@dgif.virginia.gov](mailto:Suzie.gilley@dgif.virginia.gov), or visit [www.dgif.virginia.gov/education/project-wild/](http://www.dgif.virginia.gov/education/project-wild/).



## Virginia Wild School Sites Workshop

A Virginia WILD School Sites Workshop is a six-hour, basic introduction workshop that covers some of the technical aspects of establishing wildlife habitat on school property. Virginia WILD School Sites is primarily intended for classroom teachers of grades K-12 who are just getting started with a schoolyard project. Because the most successful schoolyard projects are those which involve all grade levels and all subject areas, WILD School Sites workshops are intended for all of the faculty at one school. In those cases where there is a county-wide interest, workshops may be arranged for an entire district, with participants coming from more than one school. For more information, visit [www.dgif.virginia.gov/habitat/wild-school-sites.asp](http://www.dgif.virginia.gov/habitat/wild-school-sites.asp) or contact Wildlife Habitat Education Coordinator, Carol Heiser at 804-367-6989.

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## WOW (Wonders of Wetlands) Guide

Wetlands are valuable, diverse and interesting water environments to teach about. WOW (Wonders of Wetlands) is a collection of 40 lesson plans for use with K-12th graders that focuses on teaching about wetlands. An extensive section on restoration of wetlands highlights this guide. The 330-page guide is available for \$21.95 from National Project WET through their on-line store at [store.projectwet.org/](http://store.projectwet.org/) or by calling toll free 866-337-5486. For more information about Project WET International contact [info@projectwet.org](mailto:info@projectwet.org). For more information about upcoming WOW workshops, visit the Virginia Naturally Calendar of Events or contact the Virginia Office of Environmental Education at VA DEQ by visiting the website at [www.deq.virginia.gov/education](http://www.deq.virginia.gov/education).

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## Stewardship Projects and Programs

### Adopt-A-Highway

So, what do roadways and waterways have in common? **Litter**. Much of what is deposited on roadways ends up in our rivers and streams. So, clean up a highway and you'll be helping to keep our waterways clean. For information on how your club or group can adopt a highway, contact the VDOT at 1-800-PRIDE-VA or visit [www.virginiadot.org/programs/prog-aah-default.asp](http://www.virginiadot.org/programs/prog-aah-default.asp).

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### Adopt-A-Stream

You need to get your hands a little dirty to truly learn about nature. Whether intentional or not, our waterways receive tons of litter each year. There are many ways that litter is hazardous. Swimmers can cut their feet on glass. Propellers get caught in old rope and fishing line and it can be deadly to marine animals. Sea turtles swallow plastic bags mistaking them for their favorite food, jellyfish. They slowly starve as their digestive systems are inactivated. Seagulls, ducks and other animals become entangled in discarded fishing line, and many fish die in old nets drifting free with the tides. Some trash will sink and be covered up with sediment eventually. But plastics will not disintegrate and can float or remain suspended in the water. Thus a single piece of plastic litter might be a problem for hundreds of years. It's up to each of us to keep Virginia's rivers, streams, lakes and bays clean. This statewide program aims to reduce litter while advancing citizen stewardship and understanding of the Commonwealth's precious waterways. For more information visit the VA DCR website at [www.dcr.virginia.gov/soil\\_&\\_water/adopt.shtml](http://www.dcr.virginia.gov/soil_&_water/adopt.shtml).



### Become Active in Earth Force

Earth Force engages young people as active citizens who improve the environment and their communities now and in the future. Through Earth Force young people get hands-on, real-world opportunities to practice civic skills, acquire and understand environmental knowledge, and develop the skills and motivation to become life-long leaders in addressing environmental issues. Capital Region Earth Force provides hands-on training, resources and support to assist educators with implementing the GREEN program in their classrooms. Through our unique six-step process, students learn how to assess the health of a local watershed and use their findings to create lasting solutions to environmental problems. Visit their website at [www.earthforce.org](http://www.earthforce.org).

## Contact Your Local Litter Program Managers

VA DEQ has a list of regional litter program managers throughout the state. Each litter program is different, and there are different opportunities to get involved in each locality. Are you interested in serving as a “Litter Ambassador” and helping staff booths at community events? Are you willing to work with a committee to address litter issues in your local area? Do you want to participate in a litter cleanup? Go to the VA DEQ website and look at the contacts page and contact your local litter program manager [www.deq.virginia.gov/recycle/contactlist.html](http://www.deq.virginia.gov/recycle/contactlist.html) or call VA DEQ’s Litter Coordinator at 804-698-4055.

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## Organize a Waterway Cleanup

Cleanups can help restore the natural beauty of an area and be an educational activity. You can jump on board and organize your own cleanup project or help out at events statewide during September and October during Virginia Waterways Cleanup and International Coastal Cleanup in Virginia. Their planning guide features data sheets to track and analyze the kind of litter and debris that is collected. Contact Katie Register at [cleanva@longwood.edu](mailto:cleanva@longwood.edu) or visit the Clean Virginia Waterways website at [www.longwood.edu/cleanva/](http://www.longwood.edu/cleanva/).



## Plant a Buffer Strip

By planting trees and other native plants along streams and banks, you’ll help keep the water clean. Vegetation takes up nutrients and helps prevent erosion by stabilizing the soil. Your local forestry office or soil and water conservation district will have publications that give more background on “riparian buffers.” You can get your class or group started by planting trees. Visit their on-line resources at the VA DOF website, [www.dof.virginia.gov/rfb/index.shtml](http://www.dof.virginia.gov/rfb/index.shtml) or call 434-977-6555.

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## “Plant” an Oyster Garden

Students who have access to a pier in a tidal zone, can nurse seed oysters in a floating garden. Baby seed oysters are “planted” in “floats” in the fall. The floats are kept clean and oysters are protected from predators like blue crabs. The following summer, when they’ve reached approximately two inches in diameter, they’re transplanted into designated sanctuary reefs. The cost to build the float and purchase the seed oysters is about \$100.

For more information, visit the Virginia Coastal Zone Management Program for the Virginia Oyster Gardening Guide at [www.deq.virginia.gov/coastal/gardening.html](http://www.deq.virginia.gov/coastal/gardening.html). Also visit the Virginia Marine Resources Commission website at [web.vims.edu/abc/green/ogp.html?svr=www](http://web.vims.edu/abc/green/ogp.html?svr=www) or contact the Chesapeake Bay Foundation at 804-780-1392, [Chesapeake@cbf.org](mailto:Chesapeake@cbf.org) or visit [www.cbf.org/virginiaoysters](http://www.cbf.org/virginiaoysters) or contact the Oyster Reef Keepers of Virginia at 757-460-1200.

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## Save Our Streams Program

This adopt-a-stream program is intended to get you and your group into the water. This is a national water quality monitoring program for streams that involves the collection and analysis of aquatic insects. It is suitable for youth and adult audiences. Workshops are available for program leaders. Contact Virginia Save Our Streams, Izaak Walton League of America at 804-615-5036, email [vasosoffice@vasos.org](mailto:vasosoffice@vasos.org) or visit [www.vasos.org/](http://www.vasos.org/).

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## Stencil Your Storm Drains

Rain water and snowmelt are diverted from city streets, sidewalks, parking lots, schoolyards, and subdivisions by storm drains which lead to local waterways. Water draining from these areas can carry significant amounts of fertilizers, motor oil, litter, pesticides, animal wastes, and other contaminants. By stenciling a message on the drains in your community such as “Dump No Waste...Drains to Stream,” you can encourage people to prevent pollutants from entering their waterways. For more information visit the VA DCR Resource Guide on-line at [www.dcr.virginia.gov/stewardship/svresourceguide.htm](http://www.dcr.virginia.gov/stewardship/svresourceguide.htm).



## **WildlifeMapping Project**

This is an outreach project that allows school children, citizens, community groups and other organizations to collect data on the distribution of common wildlife species. The data will then be added to the state's biological database and used in the development of population distribution maps, which are a vital component for stewardship programming. For more information, contact Lou Verner, coordinator, at VA DGIF at 804-367-1779, [lou.verner@dgif.virginia.gov](mailto:lou.verner@dgif.virginia.gov) or visit [www.dgif.virginia.gov/wildlifemapping/](http://www.dgif.virginia.gov/wildlifemapping/).

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## **More Resources and Ideas of Things to Do**

### **Alliance for the Chesapeake Bay**

The Alliance for the Chesapeake Bay is a regional nonprofit organization that builds and fosters partnerships to protect and to restore the Bay and its rivers. They teach and promote watershed protection and restoration, and offer a variety of information, publications, outreach and training. For more information visit [www.acb-online.org/index.cfm](http://www.acb-online.org/index.cfm) or call the Virginia office at 804-775-0951 or submit your question to "Ask the Experts" online.

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### **Bay Education and Watershed Training**

The National Oceanic and Atmospheric Administration (NOAA) Chesapeake Bay B-WET Program provides resources for hands-on watershed education to students and teachers to foster stewardship of the Chesapeake Bay. NOAA recognizes that environmentally literate citizens with the skills and knowledge to make well-informed environmental choices are the key to sustaining the Nation's ocean and coastal environments. A variety of NOAA resources are available, such as cooperative programs at Nauticus, the National Maritime Center (Norfolk, VA), the Cooperative Oxford Laboratory (Oxford, MD), the Smithsonian Environmental Research Center, and other future partner sites. These strategic partnerships are designed to increase knowledge and awareness of NOAA sciences and career opportunities. For more information visit NOAA online [www.noaa.gov/](http://www.noaa.gov/).

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### **Chesapeake Academic Resources for Teachers (ChART)**

Chesapeake Academic Resources for Teachers (ChART) is a resource designed to help educators provide Meaningful Watershed Educational Experiences to their students. The ChART clearinghouse offers Bay-related lesson plans and activities, field studies and professional development opportunities for educators. Visit <http://chart.chesapeakebay.net/>.

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### **Dan River Basin Association (DRBA)**

Dan River Basin Association (DRBA) offers river and trail outings for fun and friendship. They create river accesses for boating, floating and fishing, and link people with places by promoting trails and greenways. They create opportunities for adults and school children to learn about the health of their local streams and to restore local trout fisheries. And DRBA actively works to protect the region's heritage, such as the Dan River's bateau navigation system. Visit [www.danriver.org/](http://www.danriver.org/) for more information.

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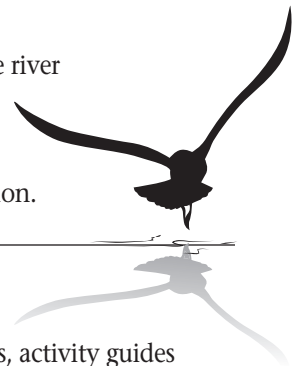
### **Ocean and Bay Teaching Materials by VIMS**

The Virginia Institute of Marine Science has a collection of more than 100 videos, software packages, activity guides and other resources for teaching about water and the environment awaiting you and your water education program. Bay Team Teachers can come to your school and conduct lessons for your students. Visit their website at [www.vims.edu/](http://www.vims.edu/) or call 804-684-7164.

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### **Field Manual for Water Quality Monitoring: An Environmental Education Program for Schools**

This is the definitive instructional guide to conducting chemical tests for water quality parameters. It is also available from LaMotte at [www.lamotte.com/pages/edu/3-1508.html](http://www.lamotte.com/pages/edu/3-1508.html).



## ***Floating/Fishing Guides***

Get the drift of what Virginia's rivers really have to offer by taking a class rafting trip, perhaps with a little fishing on the way down. VA DGIF has publications that will give you details on put-in and take-out points, float times, fishing information, and so forth for Virginia's rivers. Or, maybe you can organize a club or community float. For a copy of these brochures call VA DGIF at 804-367-1000 or visit [www.dgif.virginia.gov/fishing/](http://www.dgif.virginia.gov/fishing/).

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## ***GLOBE (Global Learning and Observation to Benefit the Environment)***

GLOBE (Global Learning and Observation to Benefit the Environment) is a worldwide hands-on, primary and secondary school-based science and education program. GLOBE's mission is to promote the teaching and learning of science, enhance environmental literacy and stewardship, and promote scientific discovery. Students and teachers participating in the GLOBE hydrology program should gain inquiry abilities and understanding of a number of concepts. These abilities include the use of a variety of specific instruments and techniques to take measurements and analyze the resulting data along with general approaches to inquiry. For more information about the GLOBE program and a list of Virginia GLOBE partners, training opportunities, and facilitators, go to: [www.globe.gov](http://www.globe.gov).

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## ***Lessons from the Bay***

Available on-line, the purpose of Lessons from the Bay is to help Virginia school teachers of grades 3-6 incorporate into their classrooms a variety of activities and projects related to protecting and restoring the Chesapeake Bay watershed, in keeping with the state's commitment to the Chesapeake 2000 Agreement. Their website is found on the VA DOE website at [www.doe.virginia.gov/VDOE/LFB/](http://www.doe.virginia.gov/VDOE/LFB/).

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## ***Living on Karst: A Reference Guide for Landowners in Limestone Regions***

By keeping Virginia's rivers clean, you can help protect the Commonwealth's vital ground water supplies. This guide explains the connection between surface and ground water, as well as protection methods. It is available on-line at [www.virginiacaves.org/lok/page1.htm](http://www.virginiacaves.org/lok/page1.htm) or [www.dcr.virginia.gov/natural\\_heritage/livingonkarst.shtml](http://www.dcr.virginia.gov/natural_heritage/livingonkarst.shtml).

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## ***The James River in Richmond: Your Guide to Enjoying America's Best Urban Waterway***

This book is an incredible source for unique and valuable historic, ecologic, recreational, and scenic information on the James River. It includes sections on fishing, paddling, floating, nature study, rock climbing, biking and much more. It is available at some libraries and at bookstores and on-line.



## ***The Landowner's Guide to Managing Streams in the Eastern United States***

Doctor up a stream by following the example renovation projects in this guide. The information is available on-line through Virginia Cooperative Extension at [www.ext.vt.edu/pubs/forestry/420-141/420-141.html](http://www.ext.vt.edu/pubs/forestry/420-141/420-141.html).

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## ***Trout in the Classroom Program***

The Virginia Museum of Natural History (VMNH) offers Trout in the Classroom (TIC) programs. TIC is an environmental education program that connects water quality issues and conservation for all ages. TIC participants raise brown trout eggs, monitor the tank water quality, and engage in stream habitat studies. In the TIC program, students learn to care about their trout and the habitat in which trout live. As the program progresses, students see connections between the trout, water resources, the environment, and themselves. For more information on the TIC programs offered at VMNH, or other water related programs, call (276)-634-4185 or visit [www.vmnh.net/](http://www.vmnh.net/).

## Virginia Master Naturalist Program



The Virginia Master Naturalist Program is a statewide corps of volunteers providing education, outreach, and service dedicated to the beneficial management of natural resources and natural areas within their communities.

Interested Virginians become Master Naturalists through training and volunteer service. As part of the basic training program, master naturalist are trained in such topics as in ecosystem dynamics, wetlands or aquatic ecology, and estuary and coastal ecology and management. Chapter members contribute to volunteer service projects in their communities related to water quality education, stewardship, and citizen science projects. For more information, go to: [www.virginiamasternaturalist.org](http://www.virginiamasternaturalist.org).

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## Virginia's Natural Resource Education Guide

This guide is available on-line and offers information, activities and resources for elementary teachers. Topics include agriculture, bay, forests, energy, open space, public policy, soils, pollution prevention and wildlife to name a few. To read or download the chapters visit [www.vanaturally.com/guide/](http://www.vanaturally.com/guide/).

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## Water Resource Education Poster Series

Nine water resource topics are covered in this series of posters. The posters are illustrated in cartoon format and are available on-line and in pdf format (they are no longer available in print format). They are designed to be used individually or combined to form a wall mural. The reverse sides contain educational activities. Two versions are available, one for grades 3-5 and the other for grades 6-8. Topics include oceans, watersheds, hazardous waste, wetlands, water use, wastewater treatment, navigation, ground water and water quality. The posters and their activities could be used as the core of a water education program. To obtain the downloads, visit the U.S. Geological Survey website at [water.usgs.gov/outreach/OutReach.html](http://water.usgs.gov/outreach/OutReach.html).

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## Wildlife Plantings, Boxes and Platforms

How-to plans for building osprey and goose platforms are included in this publication. These make great aquatic stewardship projects for clubs or classrooms. Contact Suzie Gilley, Project WILD Coordinator at VA DGIF at 804-367-0188 or [Suzie.gilley@dgif.virginia.gov](mailto:Suzie.gilley@dgif.virginia.gov).

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## Places to Go and "Get Your Feet Wet"

### 4-H Camps and Conference Centers

Most 4-H camps offer outdoor skills programs for youth that often include fishing, canoeing and other water-related topics. Many are available to school groups. Or, become a 4-H leader and start an outdoor club or your own. Contact your local 4-H agent or Virginia Cooperative Extension Office for more information about these programs. Visit the Virginia Cooperative Extension website at [www.ext.vt.edu/](http://www.ext.vt.edu/) and click "Local Extension Offices."

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### Camps

A number of private camps have professionally-trained environmental educators on staff and offer day-long or overnight nature programs. Consult the yellow pages directory, call the American Camping Association's Virginia office at 1-800-347-7523 or visit their website at [www.acacamps.org/](http://www.acacamps.org/).





## **Chesapeake Bay Interpretive Buoy System (CBIBS)**

Chesapeake Bay Interpretive Buoy System (CBIBS) is a newly installed trail guide and observing system being developed by the National Oceanic and Atmospheric Administration. CBIBS is a system of buoys placed along portions of the Captain John Smith Chesapeake National Historic Trail. These on-the-water platforms merge the modern technologies of cellular communications and internet-based information sharing. You can pull out your cell phone and dial up the interpretive buoy closest to your destination – it reports real-time weather and environmental information like wind speed, temperature, and wave height. For more information see the website at [www.buoybay.org/site/public/](http://www.buoybay.org/site/public/).

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## **Conservation Groups**

Many groups, like the Virginia Native Plant Society, Trout Unlimited, and the Nature Conservancy, sponsor field trips for their members or organized groups. Many of these groups are Virginia Naturally Partners and you can search for their contact information at [www.vanaturally.com/partners.html](http://www.vanaturally.com/partners.html).

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## **John Smith Trail**

Captain John Smith's Trail is a 40-site water trail and auto tour for modern explorers. Each set of three travel maps features historic descriptions and information for the modern traveler, including where to hike, camp and launch your boat. Maps can be ordered and educator's resources are available on the website, [www.virginia.org/johnsmithtrail/](http://www.virginia.org/johnsmithtrail/).

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## **Local Parks & Recreation Departments**

Many city and county parks and recreation departments offer outdoor skills programs. Refer your students. Consult your phone directory under the governmental listings section for your county or city agency (usually in the blue pages). Many localities supply a seasonal listing of activities.

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## **"On the Water" Field Trips**

You can make the Chesapeake Bay come alive for your students by scheduling a field trip with professionally-trained educators. From a canoe, workboat, or even a schooner, they'll fish, dredge oysters, observe land uses, or learn ways to test water quality. Visit the Chesapeake Bay Foundation website [www.savethebay.cbf.org](http://www.savethebay.cbf.org) or call the Virginia office at 804-780-1392 to find out about scheduling a field trip. Funding assistance is available through Virginia Naturally Classroom Grants, see [www.vanaturally.com/classroomgrants.html](http://www.vanaturally.com/classroomgrants.html).

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## **Wildlife Management Areas (WMAs)**

The VA DGIF welcomes visitors to their Wildlife Management Areas (WMAs). These are tracts of land that are purchased and maintained for hunting and fishing. WMAs can offer great backdrops for a day of outdoor education. Virginia has 36 WMAs. For more information visit the website at [www.dgif.virginia.gov/wmas/](http://www.dgif.virginia.gov/wmas/).

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## **Virginia State Parks**

Virginia has 35 state parks that abound with opportunities to get your self into the water. You can pan for gold at Lake Anna, watch eagles at Caledon, bike along the New River, learn about water-etched caves at Natural Tunnel, or enjoy a quiet canoe venture on one of their many lakes. Schedule a field trip. Most parks have trained naturalists and educators who can assist you in designing or conducting an educational activity. Some offer special education facilities and equipment for conducting nature study.

To find out what state park is nearest to you, call the VA DCR at 1-800-933-PARK, email at [resvs@dcr.virginia.gov](mailto:resvs@dcr.virginia.gov) or visit their website at [www.virginiastateparks.gov](http://www.virginiastateparks.gov). They also offer "Your Backyard Classrooms" curriculum and teacher workshops which is a set of K-12 science and social studies activities tailored to the parks. There are three editions: Chesapeake, Mountain and Piedmont. Each contains activities directly related to the natural environment in the region. Visit the website for more information at [www.dcr.virginia.gov/state\\_parks/ybc.shtml](http://www.dcr.virginia.gov/state_parks/ybc.shtml).

## **Virginia Soil and Water Conservation Districts (SWCD)**

Virginia has 47 Soil and Water Conservation District (SWCD) offices throughout the state that offer educational outreach programs. Find your local office at [www.dcr.virginia.gov/soil\\_&\\_water/swcds.shtml](http://www.dcr.virginia.gov/soil_&_water/swcds.shtml). Contact them to see what they offer.

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## **Virginia State Forests**

Virginia has 19 state forests that can provide opportunities for student research projects and other outdoor learning. State forests are managed to supply multiple benefits, including soil and watershed protection, wildlife habitat, recreation, and sustainable forest products. Visitors to state forests are asked to adopt a “leave no trace” ethic. Locations and information about state forests can be found at [www.dof.virginia.gov/stforest/index.shtml](http://www.dof.virginia.gov/stforest/index.shtml).

# **Wrap It Up!**

## **Get Funding and Recognition**

### **Chesapeake Bay Restoration Fund Grants**

This grant program funds environmental education and action-oriented conservation and restoration projects within the Chesapeake Bay watershed. Applicants (state agencies, local government, public and private non-profits and institutions) should complete an application by calling Chesapeake Bay Restoration Fund at 804-786-3591 or visit [www.dcr.virginia.gov/soil\\_&\\_water/bayfund.shtml](http://www.dcr.virginia.gov/soil_&_water/bayfund.shtml).

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### **Environmental Stewardship Awards**

These awards, sponsored by the Secretary of Natural Resources and the Virginia Petroleum Council, recognize innovative actions and effective stewardship initiatives that help enhance or protect Virginia’s environment. Awards are presented in each of four categories: youth, adult, organization, and communication/education products or programs. For more information, visit [www.deq.virginia.gov/info/vpcaward.html](http://www.deq.virginia.gov/info/vpcaward.html).

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### **Stewardship Virginia**

Stewardship Virginia is a statewide initiative held twice annually in April/May and in September/October to help citizens with projects that enhance and conserve Virginia’s natural and cultural resources. For more information, visit the website at [www.dcr.virginia.gov/stewardship/](http://www.dcr.virginia.gov/stewardship/), call 1-877-42-WATER or email [Bonnie.Phillips@dcr.virginia.gov](mailto:Bonnie.Phillips@dcr.virginia.gov).

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### **Virginia Environmental Endowment Grants**

Mini-grants of \$1,000-\$5,000 are offered on a competitive basis for community based projects that strengthen environmental education in schools and community programs. Projects must focus on water quality, land use, wetlands protection and/or the Chesapeake Bay and should promote stewardship through local action. Call 804-644-5000 or visit [www.vee.org](http://www.vee.org).

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### **Virginia Naturally**

Virginia Naturally provides citizens with “one-stop” shopping to programs and information to learn about Virginia’s environment. At this gateway site, you’ll find links to more than 800 organizations which provide environmental education programs and services in Virginia including volunteer and funding opportunities, teacher workshops and lesson plans, conferences, and community events to name a few. Visit Virginia Naturally at [www.vanaturally.com](http://www.vanaturally.com).

## ***Virginia Naturally School Recognition Program***

The Virginia Naturally School Recognition Program is the official environmental education school recognition program for the state. This program recognizes the wonderful efforts of many Virginia schools to increase the environmental awareness and stewardship of our youngest citizens. To participate, visit [www.dgif.virginia.gov/education/school-recognition/](http://www.dgif.virginia.gov/education/school-recognition/).

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## ***Watershed Roundtables***

Active in each major river basin, these collaborative groups include agencies, local government, community groups, and help facilitate and promote many projects related to water quality. Find your watershed's roundtable at [www.vawatersheds.org](http://www.vawatersheds.org).

